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figure yet recorded. Very little of the valuable by-products is used for feeding farm stock in Syria; the husks, which constitute about 35% of the weight of the seed, are disposed of mainly as boiler fuel.

In the areas near the olive groves there are about 750 animal or hand-operated mills and presses and about 200 either wholly or mainly mechanically operated. The annual production of olive oil has averaged 10,000 tons over the 10 years 1942 to 1951, five of which were poor seasons. Most of the production is locally consumed, forming an important component of the diet.

The seed crushing factories employ about 1,000 workers, and in the olive growing districts there are probably another 1,500-2,000 who work on the olive mills and presses for short periods each year.

Since August 1, 1952 there has been an embargo on the import of vegetable oils to protect the local market.

Soap

In the past the renowned Syrian soap industry was based entirely on olive oil; now there is a tendency to mix in cheaper oils and fatty acids. The industry has lost much ground both in the home and foreign markets due to the competition of occidental soaps and the failure of Syrian manufacturers to modernize their methods. Sir Alexander Gibb & Partners reported in 1947 that by degrees the small "cottage" installations were giving way to larger, though not necessarily modern, factories.

Today according to official figures eight of the 59 soap factories are considered modern; 600 workers are employed.

The total soap production in 1947 was under 4,000 tons. By 1953 it was estimated to have risen to between 8,000-9,000 tons, of which 1,900 tons were exported. Since August 17, 1952 importation of most types of soap has been prohibited.

Sugar Refining

Until the Sugar and Agricultural Products Company started production on a small scale in Homs in 1949, Syria imported all of its sugar requirements. growing only a small amount of cane locally. The company has tried to develop a beet crop that will provide most of domestic sugar requirements. In 1953, 51,500 tons of beet produced 7,058 tons of sugar.

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The company's present capacity is 800 tons of beet per day. The beet pulp is dehydrated for use as animal fodder and about 600 tons were exported in 1953.

Raw sugar is imported from the West Indies, South America and Formosa. In 1952, imports of 16,400 tons produced about 15,000 tons of refined sugar; in 1953 imports rose to 24,000 tons, producing about 22,200 tons of refined sugar.

The total 1952 and 1953 production of refined sugar was 19,200 and 30,000 metric tons respectively. An average yield of about 14% refined sugar is obtained from beet sugar and 91.5% of refined sugar from the raw sugar.

The imported raw sugar is taxed at 27.5 piasters per kg., while the corresponding tax on imported refined sugar is 43.5 piasters. The price of refined sugar at the time of the mission's visit was 85 piasters per kg. Although the law provides for tax rebate on exported goods containing sugar, the net price is still considerably higher than world prices and it was reported to be administratively extremely difficult to obtain a rebate.

The molasses by-product is used for the production of alcohol, of which 477 tons were produced in 1953 by fermentation and distillation.

Vegetable and Fruit Canning and Preserving

Damascus is the principal center of the canning and preserving industry, the Ghouta being an important vegetable and fruit growing area. Two large factories and a smaller one, equipped with modern machinery, produce canned vegetables and fruit, dried fruit, fruit paste, fruit juices, jams, pickles, etc., manufacturing their own cans from imported tin plate. In the canning season these three factories employ about 1,200 workers in all. There are also a considerable number of small establishments in Damascus and elsewhere which produce jams, paste, juices, etc. Production varies considerably but recent estimates suggest a total output of about 4,000 tons a year.

The supply of vegetables for canning is limited and their quality could be greatly improved. The industry has suffered from the dissolution of the Customs Union with Lebanon, that country having been an important market.

As the Syrian market for canned goods is limited, the industry is very dependent on exports, but the high price of sugar makes successful compe-

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An increase of about 60% in cotton production is expected by 1960, but present power capacity appears adequate to meet this expansion. 377 248

Glass

The Damascus glass factory owns a 600-KW power plant. The total productive capacity of the factory is about 43 tons of glass per day; in 1953 about 3,000 tons of glass were actually produced, representing about 70 days output at full capacity. If a consumption of about 100 KWH per ton of glass is assumed then the generated power in 1953 would have been about 0.3 million KWH. 377 323

Cold Storage

A cold storage plant in Damascus has a 500-KW power plant interconnected with the public utilities network. It can be assumed that about half of the approximately 2 million KWH required annually is supplied by the public utilities and half by the factory's plant. 377 254

Oil Mills

Two Aleppo oil mills have private power plants, the larger with a capacity of 1,200 KW, the smaller with 300 KW. These factories work only about 150 days per year (say six days per week during six months). With one-third of the capacity in reserve and an assumed load factor as low as 10% the power generated per year would be about 1.5 million KWH. 377 388

Flour Mill

A flour mill in Aleppo has a 400-KW plant. With a utilization of two-thirds of the capacity for 6,000 hours the power generated would be about 1.2 million KWH. 377 256

Sugar

In 1953 the Homs sugar factory processed 7,000 tons of sugar from beets and refined 22,000 tons from raw sugar. Power required for the former 377 257

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was stated to average 72 KWH per ton (this is very low compared with the 120-150 KWH generally required for this process); power for refining would not exceed 20 KWH per ton. The factory's 2,000 KW steam generators are interconnected with the public utilities network, allowing about 250 KW to be supplied or received according to the relative needs and availabilities in the two systems.

The above figures on beet and raw sugar processing indicate (at 72 and 20 KWH per ton respectively) that some one million KWH were generated for these purposes in 1953, exclusive of power supplied to the Homs-Hama network.

It is anticipated that sugar beet extraction will increase from 7,000 tons to some 20,000 tons by 1960, requiring an additional one million KWH.

Dyeing

The Hama dyeing plant's 435 KW generators are not connected with the public utilities network. The power generated by this plant in 1953 is estimated at about 0.6 million KWH.

Conclusion

The power generated by private factory power plants in 1953, equal to about one-third of that generated in the plants of the public utilities, was therefore distributed approximately as follows:

	Million KWH
Cement factories	22.0
Textile factories	13.2
Ginning factories	2.5
Glass factory	0.3
Cold storage plant	1.0
Oil mills	1.5
Flour mills	1.2
Sugar factory	1.0
Dyeing factory	0.6
Total	43.3

Future power requirements will be largely conditioned by the development of the cement, textile and beet industries, for which, as indicated